



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,737	02/15/2002	John Cassells	71745/56926	4571
21874	7590	09/07/2004	EXAMINER	
EDWARDS & ANGELL, LLP			WALLENHORST, MAUREEN	
P.O. BOX 55874				
BOSTON, MA 02205			ART UNIT	PAPER NUMBER
			1743	
DATE MAILED: 09/07/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/049,737	Applicant(s) CASSELLS ET AL.	
	Examiner Maureen M. Wallenhorst	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/23/02 & 7/22/02</u> . | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 1743

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because the abstract from the corresponding PCT application should be placed on a separate sheet. In addition, the legal phraseology such as "comprises" from the PCT abstract should be removed. Correction is required. See MPEP § 608.01(b).

4. Claims 1-2, 4, 6, 11-12 and 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the step of positioning a sampling device ready for sampling is indefinite since it is not clear whether the sampling device is attached to the aspirate/dispensing head during this step. Claim 1 does not positively recite that a sampling device is attached to the aspirate/dispense head after it is fed to the aspirate/dispense head from the supply reel.

Claim 2 is indefinite since it is not clear how the sampling devices travel from one aspirate/dispense head to another. By the supply reel?

On line 3 of claim 4, the phrase "the plane" lacks antecedent basis. See this same problem in claim 12. Claim 4 is also indefinite since on line 4 of the claim, it recites that the sampling devices can be folded away from the strip itself. Does this mean that the sampling devices can be physically separated from the strip?

On line 1 of claim 6, the phrase "the body" lacks antecedent basis.

Claim 11 is indefinite since it is not clear how the sampling devices are positioned. Are they positioned by the aspirate/dispense head?

Claim 14 is indefinite since it recites "at least one more actuator". However, claim 14 depends from claim 11, and claim 11 does not positively recite any actuators.

In claim 16, the phrase "the strip of used sampling devices" lacks antecedent basis.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 3, 8 11 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 2,329,599 (submitted in the Information Disclosure Statement filed on May 23, 2002).

GB 2,329,599 teaches of an array of micropipette tips 32 that comprises a support frame 42 interconnecting the plurality of tips 32. The frame 42 is a strip 44 of flexible material having brace members 46 extending downwardly therefrom. Each tip 32 has an open upper end attached to the surface 44 of the frame 42 so that the tips 32 and frame 42 form a one-piece, unitary member. The pipette tips are air displacement pipette tips. GB 2,329,599 also teaches of a method for using the array of micropipette tips in an aspiration/dispensing operation. In the method, a plurality of biological samples are aspirated into the pipette tips in parallel, the tips are placed in-between two closely spaced surfaces in a gel, the samples are dispensed into the space, and the tips are withdrawn from the space in the gel. See pages 7 and 10 and figures 3-4 of the GB patent.

8. Claims 3 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 3046080.

DE 3046080 teaches of a dispenser for small laboratory articles like disposable pipette tips held by a carrier tape. The dispenser comprises a housing 1 containing a storage reel 3 upon which the carrier tape 7 is wound. Pipette tips 6 can be unwound from the storage reel 3, taken from the carrier tape via an access opening 5 in the housing, and then wound up on a takeup reel 4. The pipette tips are air displacement pipette tips. See the abstract and Figure 2 in DE 3046080.

9. Claims 3 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 2935070.

DE 2935070 teaches of a storage and dispensing box 1 for pipette tips. The tips 3 are carried on a flexible strip 2, which is like a belt spirally wound so that it can be moved to present

Art Unit: 1743

a pipette tip 3 to an opening 7 in the box 1. The pipette tips are air displacement pipette tips. See the abstract and Figures 1 and 2 in DE 2935070.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of GB 2,329,599, DE 3046080 or DE 2935070. For a teaching of the GB and DE patents, see previous paragraphs in this Office action.

The GB and DE patents fail to teach that the pipette tips held by the flexible carrier strip can be a positive displacement tip, a capillary or a sampling pin. However, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the devices taught by the GB and DE patents for holding and dispensing positive displacement pipette tips, capillaries or sampling pins since the devices disclosed in the GB and DE patents are for the purpose of holding laboratory dispensing/aspirating devices, and each of positive displacement

Art Unit: 1743

pipette tips, capillaries and sampling pins are well- known in the art for their use as laboratory dispensing/aspirating devices.

13. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of GB 2,329,599, DE 3046080 or DE 2935070 in view of Bryning et al. For a teaching of the GB and DE patents, see previous paragraphs in this Office action. The GB and DE patents fail to teach that the carrier strip is wound up on the reel by holes in the strip or pipette tips acting as a gear track.

Bryning et al teach of a support 12 in the form of a flexible strip located within a cassette 16. The strip is taken up from the cassette 16 to a cassette 18. Bryning et al teach that conventional mechanisms for driving the strips are employed such as the use of gears and perforations in the strip, friction drives, rotation of the uptake reel, etc. See lines 20-25 in column 6 of Bryning et al.

Based upon the combination of any of the GB or DE patents and Bryning et al, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to wind the carrier strips holding the pipette tips taught by any one of the GB or DE patents onto the reel holding the strips by the use of holes or perforations in the strips or pipette tips since Bryning et al teach that this is one conventional way in which to drive carrier strips from a first reel onto another takeup reel.

14. Claims 1-2, 11 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arpagaus et al (US Patent no. 4,830,832, submitted in the Information Disclosure Statement filed on July 22, 2002) in view of either DE reference. For a teaching of the DE patents, see previous paragraphs in this Office action.

Art Unit: 1743

Arpagaus et al teach of a method for positioning a pipette device for sampling, aspirating a sample into the pipette, dispensing the sample to another location, and feeding the used pipette into a waste container. Specifically, pipettes 34 are situated in an array on a slide 33. The pipettes 34 are picked up by aspiration/dispensing heads 36. The number and arrangement of the pipettes picked up can be controlled and programmed into the apparatus. The heads 36 then move the pipettes to sample containers 31 where samples are aspirated into the pipettes. The pipettes then move to a plate 22 where the samples are dispensed. Finally, the pipettes 34 are ejected from the heads 36 into a waste container. See lines 34-52 in column 7 and Figures 7-8 in Arpagaus et al. Arpagaus et al fail to teach that the pipettes 34 can be supplied to the aspiration/dispensing heads 36 from a flexible carrier strip holding the pipettes on a supply reel.

Based upon the combination of Arpagaus et al and either one of the DE patents teaching pipette tips held by a carrier strip on a supply reel, it would have been obvious to one of ordinary skill in the art to supply the pipettes 34 taught by Arpagaus et al to the aspiration/dispensing heads 36 from a carrier strip on a supply reel rather than from a flat array on a rack so as to provide high-speed pipette transfer to the heads while avoiding the repetitive movement of the heads 36 to the stationary pipette tips in the flat array.

15. Claims 1-2, 11 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over either one of the DE patents. For a teaching of the DE patents, see previous paragraphs in this Office action.

The DE patents fail to specifically teach of a method of using the pipette tips where the pipette tips are fed from the carrier strips to an aspiration/dispensing head, a sample is aspirated at one location and then dispensed at another location. However, one of ordinary skill in the art

Art Unit: 1743

would have realized that the pipette tips held by the carrier strips on the supply reels taught by the DE patents are intended to be fed to some type of aspiration/dispensing head since these patents disclose that the pipette tips are taken from the strip through an opening in the container holding the carrier strips. One of ordinary skill in the art would have realized that the actions of aspirating and then dispensing a sample from one location to another are performed with the pipette tips taught by the DE patents once picked up from the carrier strips since the purpose of pipettes is the volumetric transfer of liquids.

16. Claims 4 and 12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims since none of the prior art of record teaches or fairly suggests an array of pipette tips carried by a strip of flexible material, wherein the strip contains hinge regions that allow some or all of the pipette tips to be folded away from the plane of the strip

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Please make note of: Brophy et al which corresponds to GB 2,329,599, DE 2821346, which teaches of pipette tips on a carrier strip similar to the other DE patents used in the prior art rejections, and Goodman, Meguro et al and Seidel et al who teach of laboratory devices held by carrier strips.

Art Unit: 1743

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen M. Wallenhorst whose telephone number is 571-272-1266. The examiner can normally be reached on Monday-Wednesday from 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Maureen M. Wallenhorst
Primary Examiner
Art Unit 1743

Mmw

September 2, 2004

Maureen M. Wallenhorst
MAUREEN M. WALLENHORST
PRIMARY EXAMINER
GROUP ~~1200~~ 1700